

WHAT IS CLAIMED IS:

1. An internet protocol address assignment system comprising a subscriber terminal, a subscriber exchange, a remote access server, an authentication server and a resource control server, the remote access server being connected to the subscriber exchange
5 using a network node interface, an internet protocol address being assigned to the subscriber terminal using the authentication server and the resource control server,

wherein the remote access server receives a calling sent from the subscriber terminal via the subscriber exchange, permits the resource
10 control server to reserve the internet protocol address on the basis of information whether or not there is any internet protocol address to be assigned to the subscriber terminal, and assigns the internet protocol address reserved in the resource control server to the subscriber terminal when the subscriber terminal is authenticated.

2. The internet protocol address assignment system claimed in claim 1, wherein when there is the internet protocol address to be assigned to the subscriber terminal, the resource control server reserves the internet protocol address, and the remote access server
5 assigns the internet protocol address reserved in the resource control server to the subscriber terminal when the subscriber terminal is authenticated by the authentication server.

3. The internet protocol address assignment system claimed in claim 1, wherein when there is no internet protocol address to be assigned to the subscriber terminal, the resource control server cannot reserve the internet protocol address, and the
5 remote access server permits the subscriber exchange to release the line.

4. An internet protocol address assignment system comprising a subscriber terminal, a subscriber exchange, a remote access server and an authentication and resource control server, the remote access server being connected to the subscriber exchange
5 using a network node interface, an internet protocol address being assigned to the subscriber terminal using the authentication and resource control server, wherein

the remote access server receives a calling sent from the subscriber terminal via the subscriber exchange, permits the
10 authentication and resource control server to reserve the internet protocol address on the basis of information whether or not there is any internet protocol address to be assigned to the subscriber terminal and to execute authentication, and assigns the internet protocol address reserved in the authentication and resource control
15 server to the subscriber terminal when the subscriber terminal is authenticated.

5. The internet protocol address assignment system claimed in claim 4, wherein when there is the internet protocol address to be assigned to the subscriber terminal, the authentication and resource control server reserves the internet protocol address, and the remote
5 access server assigns the internet protocol address reserved in the authentication and resource control server to the subscriber terminal when the subscriber terminal is authenticated by the authentication and resource control server.

6. The internet protocol address assignment system claimed in claim 4, wherein when there is no internet protocol address to be assigned to the subscriber terminal, the authentication and resource

control server cannot reserve the internet protocol address, and the
5 remote access server permits the subscriber exchange to release the
line.

7. The internet protocol address assignment system claimed
in claim 1, wherein the authentication server executes the
authentication on the basis of a sender number of the subscriber
terminal.

8. The internet protocol address assignment system claimed
in claim 2, wherein the authentication server executes the
authentication on the basis of a sender number of the subscriber
terminal.

9. The internet protocol address assignment system claimed
in claim 3, wherein the authentication server executes the
authentication on the basis of a sender number of the subscriber
terminal.

10. The internet protocol address assignment system
claimed in claim 4, wherein the authentication and resource control
server executes the authentication on the basis of a sender number of
the subscriber terminal.

11. The internet protocol address assignment system
claimed in claim 5, wherein the authentication and resource control
server executes the authentication on the basis of a sender number of
the subscriber terminal.

12. The internet protocol address assignment system

claimed in claim 6, wherein the authentication and resource control server executes the authentication on the basis of a sender number of the subscriber terminal.

13. The internet protocol address assignment system claimed in claim 1, wherein the remote access server is connected to the subscriber exchange via a public switched telephone network and a signalling system number 7 signal network.

14. The internet protocol address assignment system claimed in claim 2, wherein the remote access server is connected to the subscriber exchange via a public switched telephone network and a signalling system number 7 signal network.

15. The internet protocol address assignment system claimed in claim 3, wherein the remote access server is connected to the subscriber exchange via a public switched telephone network and a signalling system number 7 signal network.

16. The internet protocol address assignment system claimed in claim 4, wherein the remote access server is connected to the subscriber exchange via a public switched telephone network and a signalling system number 7 signal network.

17. The internet protocol address assignment system claimed in claim 5, wherein the remote access server is connected to the subscriber exchange via a public switched telephone network and a signalling system number 7 signal network.

18. An internet protocol address assignment system

claimed in claim 6, wherein the remote access server is connected to the subscriber exchange via a public switched telephone network and a signalling system number 7 signal network.

19. The internet protocol address assignment system claimed in claim 7, wherein the remote access server is connected to the subscriber exchange via a public switched telephone network and a signalling system number 7 signal network.

20. A processing method of an internet protocol address assignment system comprising a subscriber terminal, a subscriber exchange, a remote access server, an authentication server and a resource control server, the remote access server being connected to the subscriber exchange using a network node interface, an internet protocol address being assigned to the subscriber terminal using the authentication server and the resource control server, comprising the steps of:

calling from the subscriber terminal to the subscriber exchange;

notifying the remote access server of the calling from the subscriber terminal to the subscriber exchange;

confirming whether or not there is any internet protocol address to be assigned to the subscriber terminal by the resource control server;

reserving the internet protocol address to be assigned to the subscriber terminal in the resource control server on the basis of the confirmation result of the resource control server;

notifying the remote access server whether or not the resource control server reserves the internet protocol address to be assigned to the subscriber terminal;

authenticating the subscriber terminal by the authentication server;

notifying the remote access server of the authentication
 25 result of the authentication server; and

assigning the internet protocol address reserved in the resource control server to the subscriber terminal when the subscriber terminal is authenticated by the authentication server.

21. The processing method claimed in claim 20, wherein when there is the internet protocol address to be assigned to the subscriber terminal, the resource control server reserves the internet protocol address, and the remote access server assigns the internet
 5 protocol address reserved in the resource control server to the subscriber terminal when the subscriber terminal is authenticated by the authentication server.

22. The processing method claimed in claim 20, wherein when there is no internet protocol address to be assigned to the subscriber terminal, the resource control server notifies the remote access server that the resource control server cannot reserve the
 5 internet protocol address, and the remote access server permits the subscriber exchange to release the line.

23. A processing method of an internet protocol address assignment system comprising a subscriber terminal, a subscriber exchange, a remote access server and an authentication and resource control server, the remote access server being connected to the
 5 subscriber exchange using a network node interface, an internet protocol address being assigned to the subscriber terminal using the authentication and resource control server, comprising the steps of:

calling from the subscriber terminal to the subscriber exchange;

10 notifying the remote access server of the calling from the subscriber terminal to the subscriber exchange;

confirming whether or not there is any internet protocol address to be assigned to the subscriber terminal by the authentication and resource control server;

15 reserving the internet protocol address to be assigned to the subscriber terminal in the authentication and resource control server on the basis of the confirmation result of the authentication and resource control server;

20 notifying the remote access server whether or not the authentication and resource control server reserves the internet protocol address to be assigned to the subscriber terminal;

authenticating the subscriber terminal by the authentication and resource control server;

25 notifying the remote access server of the authentication result of the authentication and resource control server; and

assigning the internet protocol address reserved in the authentication and resource control server to the subscriber terminal when the subscriber terminal is authenticated by the authentication and resource control server.

24. The processing method claimed in claim 23, wherein when there is the internet protocol address to be assigned to the subscriber terminal, the authentication and resource control server reserves the internet protocol address, and the remote access server
5 assigns the internet protocol address reserved in the authentication and resource control server to the subscriber terminal when the subscriber terminal is authenticated by the authentication and

resource control server.

25. The processing method claimed in claim 23, wherein when there is no internet protocol address to be assigned to the subscriber terminal, the authentication and resource control server notifies the remote access server that the authentication and resource
5 control server cannot reserve the internet protocol address, and the remote access server permits the subscriber exchange to release the line.

26. The processing method claimed in claim 20, wherein the authentication server executes the authentication on the basis of a sender number of the subscriber terminal.

27. The processing method claimed in claim 21, wherein the authentication server executes the authentication on the basis of a sender number of the subscriber terminal.

28. The processing method claimed in claim 22, wherein the authentication server executes the authentication on the basis of a sender number of the subscriber terminal.

29. The processing method claimed in claim 23, wherein the authentication and resource control server executes the authentication on the basis of a sender number of the subscriber terminal.

30. The processing method claimed in claim 24, wherein the authentication and resource control server executes the authentication on the basis of a sender number of the subscriber

terminal.

31. The processing method of claim 25, wherein the authentication and resource control server executes the authentication on the basis of a sender number of the subscriber terminal.

32. The processing method of claim 20, wherein the remote access server is connected to the subscriber exchange via a public switched telephone network and a signalling system number 7 signal network.

33. The processing method of claim 21, wherein the remote access server is connected to the subscriber exchange via a public switched telephone network and a signalling system number 7 signal network.

34. The processing method of claim 22, wherein the remote access server is connected to the subscriber exchange via a public switched telephone network and a signalling system number 7 signal network.

35. The processing method of claim 23, wherein the remote access server is connected to the subscriber exchange via a public switched telephone network and a signalling system number 7 signal network.

36. The processing method of claim 24, wherein the remote access server is connected to the subscriber exchange via a public switched telephone network and a signalling system number 7 signal

network.

37. The processing method of claim 25, wherein the remote access server is connected to the subscriber exchange via a public switched telephone network and a signalling system number 7 signal network.

38. The processing method of claim 26, wherein the remote access server is connected to the subscriber exchange via a public switched telephone network and a signalling system number 7 signal network.